

US EPA ARCHIVE DOCUMENT

Tribal EcoAmbassadors - Descriptions of Projects

1. Fort Berthold Community College, ND – Dr. Kerry Hartman

Groundwater Monitoring

The project will involve collection of hundreds of well water samples from the over 900 rural wells on The Fort Berthold Indian Reservation in Bakken, ND. Samples will be collected, preserved, pre-tested and analyzed according to proper protocols for the various groups of chemicals contained in fracking fluids and petroleum drillings. The samples will be pre-tested for presence of toxics and contaminants by the Ambassador and students. Samples will also be sent to an EPA certified lab for further analysis. All test results will be analyzed, summarized and incorporated into project reports and posters. The Ambassador will collaborate closely with EPA's ORD throughout the course.

2. Dine College, AZ –Dr. Mark C. Bauer

Participatory Air Quality Monitoring

The grant would research on air quality focused on causes including coal fired cookstoves and relative impacts on public health. This area has very high rates of asthma and chronic pulmonary disease, and would work to develop localized data on air quality for community members. This would also include a significant community based environmental education component by empowering communities to voluntarily monitor their air quality.

3. Fort Peck Community College, MT -- Renee Dufault

Epigenetics/Obesity/Toxics Exposure

This grant would develop an entire course focused on the impacts mercury has on human health that would include research and environmental education. Mercury exposure in tribal communities tends to be very high because of fish consumption rates and local contaminated sites. This fits closely within EPA's Tribal Science Council priorities and EPA's work through the Office of Children's Health Protection.

4. Turtle Mountain Community College, ND – Dr. Deborah Hunter

Monitoring Drinking Water from Private Wells

Turtle Mountain Community College will investigate the quality of drinking water from private wells within and around their tribal lands. The group will collaborate closely with the Turtle Mountain Band of Chippewa Indians (TMBCI). There are currently over 100 private wells being used on the tribal lands, and the quality of this drinking water is relatively unknown and untested. The project will positively impact over 13,000 residents in a ND county ranked 42 out of 44 in health. After the findings, the project participants will present the tribe with its findings through an environmental education program.

5. Tohono O'odham Community College, AZ –Dr. David Stone

Carbon-negative Building Products from Recycled Materials

This project will help resolve the challenges of having too much waste, too little building materials, and a housing and job shortage. The Tohono O’odham Nation’s Solid Waste Facility transports 500 tons of waste each month 65 miles to Tucson, and of this, approximately 50 tons is glass, primarily bottles. By using this glass, along with other scrap metals, they will create a carbon-negative building product based on traditional adobe. Tohono O’odham will leverage labs at UA and ASU to develop the optimal mixes and processes, and the products will be immediately used onsite on tribal lands.

6. Candeska Cikana Community College, ND -- Rachel Brazil

Developing a Campus Recycling Sustainability Program

With this grant, the Tribal EcoAmbassador will work with a cohort of students to establish the infrastructure necessary for a recycling program at the College. The program will include community research on behaviors as well as environmental education on the importance of recycling. Students engaged will be considered interns and will be paid \$10 an hour for their participation. This program also links directly to the OnCampus EcoAmbassadors program and with EPA’s help will explore collaboration with other colleges and universities involved in this program.

7. Little Big Horn College, MT -- Sara Plaggmeyer

Assessing non-point Sources on Little Big Horn River

This grant would support the development of a course focused on water quality and non-point source pollution. The students would conduct a water monitoring research initiative aimed at identifying pollutants and sources of pollution. The Office of Water and the Office of Research and Development were consulted, and agreed that this community based research fits within our mandate and our priorities for Indian country. With the data collected, the students would have an opportunity to present their findings to the Crow Legislature and Government with recommended policy solutions.

8. United Tribes Technical College – Dr. Jen Janeczek-Hartman

Energy Efficiency Competition

Dr. Hartman’s group is working with homes on the reservation to make more energy-efficient. The students are choosing from a list of energy-efficient renovations for a house, and will be involved with the selection and installation of the renovations. The students are monitoring the before and after energy use and estimating the carbon footprint. To provide more incentive, there is a competition between the students. A total of 9 houses will be renovated, and to ensure that the work and results are captured within the community, the entire families living in the selected houses are involved in the renovation process.